

DIGITAL TEXTILE PATTERNS INSPIRED BY THEMES FROM
THE LATE 1950s/EARLY 1960s

by

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Abstract

Inspired by people and objects of the late 1950s/early 1960s, textile patterns were created to use as a tool in the education of children through play. Four themes were developed, with three main prints in each theme. These twelve prints had a coordinating print and solid colors designed, and were utilized in the development of paper doll clothing. Representing the look of Jacqueline Kennedy, the paper dolls feature a pearl necklace, sunglasses, and a brunette hairstyle. Fabric was also printed on using a home-based inkjet printer, and used to construct a garment for an 18-inch, three-dimensional doll. The final outcomes were exhibited in a display window, with an interactive element for adults and children at the opening reception.

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Dedication

To my parents—you have been nothing but spectacular throughout this entire process. I could not have done it without you. Thank you for being my emotional support system for the past two years and for the future ahead. I love you!

Chapter 1. Introduction

During the late 1950s/early 1960s, textile colors and patterns in the United States were reflective of the conservative and traditional atmosphere that represented the majority of Americans; subdued colors found in nature were predominately used in apparel and home interiors, and the patterned motifs were simple and charming in their design. Basic floral, striped, and abstract patterns were the most common textile prints; solid-colored fabrics, such as various shades of green and blue, ivory, lilac, and orange were also popular within both apparel and interiors (Skinner, 1998a). Within this time period, the technology to create computer-generated patterns had not been established, so patterns were drawn by hand and a mathematical method was used to ensure proper repetition of the print onto the fabric yardage (Skinner, 1998a). Today, the majority of textile patterns are computer generated and printed with intricate and advanced textile printers, eliminating the need for hand drawn designs.

During the late 1950s/early 1960s, the fashionable impact of Jacqueline (Jackie) Kennedy on the American public was readily seen through her apparel and accessory choices. Box cut suits, white gloves, and a single strand pearl necklace were constant items within Jackie's ever-evolving wardrobe, and are the defining elements of Jackie's style (Mulvaney, 2001). While these specific items were integral to Jackie's wardrobe, they were also historical and visual representations of the late 1950s/early 1960s.

Visual representations of history have been used in the education of young girls. The American Girl® dolls are an example of representing periods in American history through the dress, accessories and story of each doll (American Girl®, 2008).

Project Aim and Objectives

The purpose of this project was to create textile patterns inspired by popular themes from the late 1950s/early 1960s to use as a tool in the education of children through play. The objectives of the project were to:

1. Research late 1950s/early 1960s themes of textile prints, Jackie Kennedy, and specific iconic objects and images for use as pattern and style inspiration.
2. Create textile patterns using computer-aided-design (CAD) software, Adobe® Illustrator® and Adobe® Photoshop®.
3. Print textiles on fabric and paper using a home-based inkjet printer.
4. Provide an educational opportunity for children aged 7 to 10 to learn about the time period by translating the textile designs into doll clothes, paper dolls, and age-appropriate text.
5. Exhibit the outcomes to the public, with an interactive session for children and adults as part of the opening reception.

Justification

Upon completion of the project, recommendations can be made for printing textiles with home-based inkjet printers, with patterns created using CAD software. This information will educate and benefit readers (including studio artists and students) on how to develop textiles using their home-based printer, removing the high financial costs and minimum yardages associated with large-scale digital printing.

Creating the doll clothing and paper dolls influenced by the late 1950s/early 1960s will integrate a child's play object with an educational aspect, which "extend[s] the function of schools into children's free time" (Chudacoff, 2007, p. 7). Incorporating an interactive situation

between children and the paper dolls at the exhibition opening supports the role of play, which “does have a function that is immediate in its behavioral, social, intellectual, and physical rewards and in the development of the child into an adult” (Chudacoff, 2007, p.1). Child’s play involves an object and/or imaginative situation, and this is linked to the doll clothing, paper dolls, and interactive exhibit.

Documenting the processes of creating textile prints and paper doll clothing will advance the methodology of practice-based research by providing an illustrated explanation of steps taken. Visually documenting the outcome demonstrates the various processes, and presents the reader with a fully integrated project, with pictorial references and text.

Chapter 2. Contextual Review

Popular Textile Colors and Patterns in the late 1950s/early 1960s

In 1961, Dwight D. Eisenhower was completing his second term as President, and the White House welcomed a new leader: John F. Kennedy. America had been a conservative nation for eight years under Eisenhower, and fashionable colors represented this time in our history. Inspired by nature, colors such as “...beige, stone green, olive green, ivory, lilac, sea blue, royal blue, gold, and brass, with the boldest...being burnt orange, turquoise, mint, and lilac” (Skinner, 1998a, p. 4) were heavily used during this time. In contrast, toward the end of President Kennedy’s short term, brighter colors, such as lemon, lime, orange, and aqua gained acceptance among Americans, although the more conservative colors still remained strong in the color palettes.

While researching fabrics and patterns of the late 1950s/early 1960s, the lack of technology in creating prints is evident, as they were all initially hand drawn. According to Skinner (1998a), “...painterly techniques were combined with mathematical precision to create repeating patterns for endless yards of fabric” (p. 5). There is an organic feel to the patterns—from the uneven lines to the asymmetrical designs—that pleasantly adds to the simplistic and conservative silhouettes found fashionable during this time. Popular patterns from this period in time can be divided into five main categories: floral, plaids/stripes, abstracts, black and white, and novelty (Skinner, 1998a) with a sixth category, modernist, also gaining acceptance among Americans (Meller & Elffers, 1991).

Floral

Immensely fashionable, floral prints ranged from small and calico-like to large motifs. The flower bloom was often not the main focal point; the attached leaves and stems were also

integrated into the design, creating depth and texture to the fabric. Many of the prints look like artwork—the designer’s brush strokes and outline are evident, and it may seem that this pattern should be painted on canvas instead of printed onto a fabric (Skinner, 1998a; Skinner, 1998b). Using many of the muted colors mentioned above, the floral patterns from this time period are sophisticated and mature, allowing for the combination of a solid color and an intricate pattern. See Figures 1 and 2.

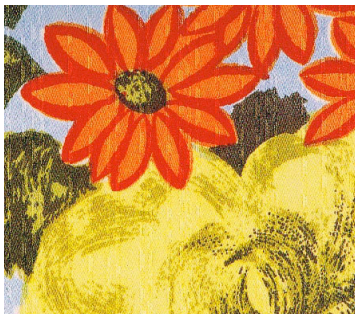


Figure 1. Sample of multi-color floral motif¹



Figure 2. Sample of blue and green floral motif²

Plaids/Stripes

While plaid patterns are typically woven with yarn-dyed yarns creating straight lines and ninety-degree angles, many of the plaids popular in the early 1960s were printed. As demonstrated in Skinner (1998a), small blocks of color, uneven lines, splotchy stripes, and odd shapes were often combined to create the illusion of a woven plaid, while distinctly remaining natural and subtle. Certain abstract plaids incorporated only round lines and oval-like shapes into the design, and other prints used a patchwork design to create a plaid (see Figure 3). Stripes were designed with wavy lines, shapes, blocks of color—anything that could produce a semi-linear line. Geometric patterns did incorporate a linear line to form squares, triangles, and

¹ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 13

² From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 24

diamonds (see Figure 4). Color use included both pastels and saturated hues. For example, one pattern paired pastels in robin's egg blue and lavender, with a bright, saturated yellow.

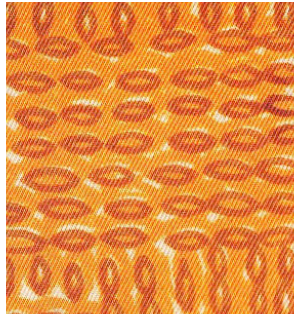


Figure 3. Sample of brown, orange, and white patchwork pattern³

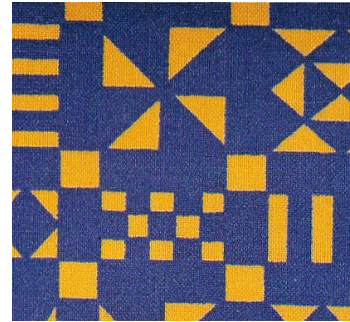


Figure 4. Sample of blue and gold geometric pattern⁴

Abstracts

In the early 1960s, abstract patterns were similar to the popular floral prints, due to their brush stroke effect, as well as blurred boundary lines between colors. Unfamiliar shapes placed in unusual locations, accented colors, and overlapping lines are a few of an abstract pattern's characteristics. Incorporating many different layers to the print, it becomes one that has no specific rhythm to it, rendering it as abstract. When choosing the usual muted color scheme, an occasional occurrence of a small burst of color might peek through the design, adding an additional interesting layer to the print (Skinner, 1998a). See Figures 5 and 6.

³ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 46

⁴ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 63

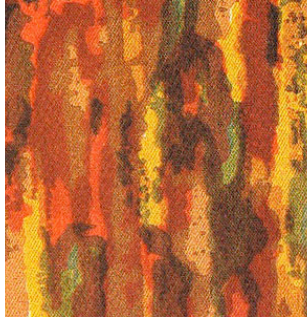


Figure 5. Sample of vertical brown, green, and red abstract design⁵



Figure 6. Sample of orange, green, and brown abstract⁶

Black and White

The combination of black and white into a fabric print is considered very sophisticated and classic, and during the early 1960s, these colors were used in various assortments of patterns. Skinner (1998a) illustrates how a single print resembles a pie-shaped design (see Figure 7) and another is an imitation of a raschel knit, using a bleached white fabric then creating the ‘lace’ pattern from the black pigment (see Figure 8). Plaids, stripes, and abstract patterns were popular with this color scheme, due to the basic but mature look of the combination.



Figure 7. Sample of black and white pie-shaped pattern⁷

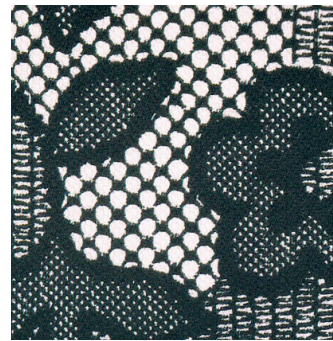


Figure 8. Sample of black and white mock-lace pattern⁸

⁵ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 70

⁶ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 79

⁷ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 81

Novelty

Wide ranges of designs are included within the novelty category, from the unique and bold, to the simple and minimal. This category acts as a ‘catch-all’ of different prints and patterns that do not fit into one of the other five categories, but novelty prints are an unusual twist to the conservative prints commonly seen (Skinner, 1998a). See Figures 9 and 10. By introducing photography to the print process, some patterns were created using enlarged photographs printed onto the fabric, such as almonds and poppies. Some imitate visible stitch lines, others printed with fruits and vegetables, and one is printed in an imitation Asian script.



Figure 9. Sample of orange, red, and black butterfly novelty pattern⁹



Figure 10. Sample of blue, green, and white novelty pattern¹⁰

Modernist

Introduced during the 1920s/1930s, modernist prints were created for interior textiles, including wall coverings (Jackson, 2002). Utilizing straight lines, ninety-degree angles, and intersecting lines, prints of the modernist period had a structured feel to them, as opposed to the organic feel of the floral and abstract prints mentioned above (see Figure 11). Inspired by

⁸ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 81

⁹ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 91

¹⁰ From Skinner, T. (1998a). *Designer fabrics of the early '60s*. Atglen, PA: Schiffer Publishing Ltd., p. 96

architecture, Frank Lloyd Wright wanted objects to be structured when enveloped in his fabrics, not just decorated with a printed surface (Meller & Elffers, 1991).

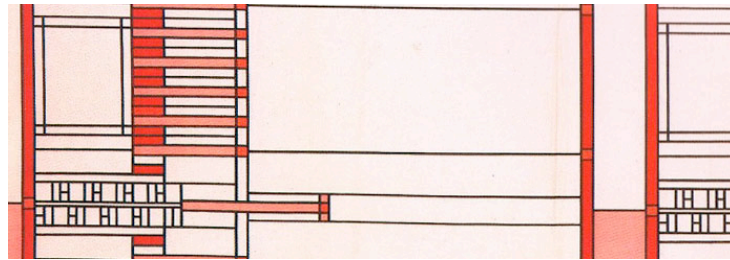


Figure 11. Sample of red linear modernist pattern¹¹

Inspiration from the late 1950s/early 1960s

Jacqueline Kennedy Onassis

Born in 1929 to a life of luxury and opulence, Jacqueline Bouvier Kennedy Onassis (Jackie) became one of the most influential style icons in modern times. Even at a young age of eighteen, Jackie attended her “coming out” debutante celebration and was crowned Queen of Debutantes, wearing a \$59 off the rack white tulle gown (instead of the made-to-order Christian Dior gown her mother had advised her to wear) and white gloves. Around her twenty-second birthday, Jackie met John F. Kennedy; they married two years later (Spoto, 2000). Created using fifty yards of silk taffeta and embellished with giant circular pincushions, Jackie’s wedding gown was very traditional, but discarded her usual style of elegant fabrics and linear designs. While the public citizens enjoyed the decorative prints popular during this time, Jackie preferred to dress herself in solid colors (Skinner, 1998a); however, she accessorized her gown with her usual touches: white gloves, a single strand pearl necklace, and sunglasses (Keogh, 2001). Beginning

¹¹ From Meller, S. & Elffers, J. (1991). *Textile designers: Two hundred years of European and American patterns for printed fabrics organized by motif, style, color, layout, and period*. New York: Harry N. Abrams., p. 434

as a Senator's wife, then as a First Lady, Jackie maintained her impeccable style and elegance as the world watched her every move.

American Culture

During the late 1950s/early 1960s, life in America was considered simple. Suburban housing areas were full of nuclear families, rebounding from the Great Depression in the 1930s and World War II from the 1940s. This was the beginning of the so-called "good life in the suburban promised land" (Time-Life Books, 1998, p. 53). Burdened by their past, the suburbanites were optimistic of the future. New homes were decorated, shiny, new cars were parked in the driveway, and toys for the children were purchased. Their children, the baby boomer generation, had vast amounts of toys to choose from and play with. Toy cars, board games, baby dolls, sleds, and hula-hoops are a fraction of the types of toys that children had access to during this time. An important object for a child to receive was a bicycle. The children rode their bicycles to and from school, and as a leisurely activity shared with friends (Time-Life Books, 1998).

For adult women, this time period brought exciting changes to the household. The kitchen was modernized with appliances created in visually appealing colors, such as fern green, lagoon blue, and buttercup yellow, with dinnerware to match (Rapaport & Stayton, 2001). Decoration of the domestic kitchen was intertwined with pastel colors and wood tones, or synthetic pieces made to resemble wooden elements. Dining furniture had an organic shape, created with curved edges, laminated seats, and Formica tabletops (Rapaport & Stayton, 2001).

Enjoyed by everyone in the household, music was exciting entertainment during this period. Former President Franklin Delano Roosevelt delivered "Fireside Chats" through the radio, from 1933 to 1944; millions of Americans listened to these speeches from their kitchens

and living rooms (Buhite & Levy, 1992). Later, the radio would be accompanied by a record player to produce music selected by the individual. Children and teenagers were often not far from a portable record player and vinyl records, with school dances becoming a popular event (Time-Life Books, 1998).

These themes from American culture personified this time period, creating objects and colors that are currently recognized as “retro” and “nostalgic”. When describing the situations, objects, and events from the era, an imaginary, visual scene can be recalled in one’s head, whether or not the individual was a part of the time period. These themes are a part of American culture and will be represented by specific objects and colors for many years to come.

Garment Styles

In 1947, Christian Dior introduced the New Look: sloped shoulders, a cinched waistline, round hips, and a full calf-length skirt. Hidden padding was used to create the illusion of fuller hips and shoulders, and the skirts were starched and stiffened to help them maintain their shape, even making the skirts stand by themselves (Nunn, 1984). The cinched waistline and full calf-length skirt remained popular through late 1950s/early 1960s, as women experimented with different silhouettes suitable for their body shape. Gabrielle “Coco” Chanel, a popular clothing designer, re-introduced her two-piece box cut suit from the 1920s for the postwar woman (Fukai, Suoh, Iwagami, Koga, & Nie, 2005); Jacqueline Kennedy also popularized the suit by wearing it with the addition of a pillbox hat (Diamond & Diamond, 2002).

Evening gowns varied in their shape: calf-length to full-length, full or narrow skirt widths, empire waistlines, and even strapless gowns were deemed appropriate for certain occasions. Women would wear evening gloves to accessorize their gowns, with the gloves primarily constructed from white satin (Nunn, 1984). Sportswear separates were becoming

popular during this time, with pedal pushers and boat neck tops fashionable for women and young girls (Diamond & Diamond, 2002). A Simplicity® pattern from the late 1950s shows two-piece pajamas, consisting of long pants and a short sleeved button-up shirt with a convertible collar (Simplicity® pajama pattern, 2009). Another pattern from this time period shows a popular swimsuit style; a one-piece wide-angle v-neck, with low cut leg openings (Simplicity® swimwear pattern, 2009).

These garments were defining elements of style for this time period. Most Americans can remember Jackie Kennedy's iconic pink box cut suit from the day her husband was assassinated, or the contoured shape of a defined waist on a calf-length dress. While these silhouettes were popular for adult women, young girls would wear this clothing as well, and patterns were also available in the same style for children's dolls.

History of Digital Textile Printing

While digitally creating a textile pattern with the use of a computer and software is a recent development in the production of prints, the area of digital textile printing has been known since 1686, with early-recorded observations and kept records. Table 1 lists important advances in the development of inkjet and digital textile printing technology.

Table 1. History of Digital Textile Printing

1686	Edme Mariotte publishes work on fluid dynamics—observes the formations of fluid drops passing through a nozzle
1748	Ebenezer Kinnersley proves electrical currents pass through water
1867	Lord Kelvin receives first patent for an inkjet printing system
1878	Lord Rayleigh describes the role of surface tension in drop formation
1920s and 1930s	Numerous patent applications for inkjet recording devices
1938	Chester Clinton develops analog electrophotography
1949	Clinton and Haloid invent Haloid A1—which fails as an office copier, but succeeds as a commercial printing plate maker
1951	Siemens releases first commercially produced inkjet printer
1959	Research Labs of Australia develops electrostatic images with liquid toners
1965	Carl Helmuth Hertz and Sven Eric Simonsson develop high-resolution continuous inkjet—produces small ink drops at high speeds—but it has a slow production speed
1968	A.B. Dick produces Videojet 9600 printer; codes cans and containers, but able to mark fabric
1973	RPL Supplies Inc. creates process to print digitally generated video images to fabric
1977	Canon invents thermal inkjet (aka bubble jet)
1989	Seiren of Fukui (largest textile printer in Japan) builds manufacturing facility for fabric; annual gross sales volume greater than \$100 million by 2000
Mid-1990s	Canon develops textile printer that prints up to 1.6 meters per minute—high retail price
1990s-Present	Numerous brands have developed printers to print at faster speeds, with larger yardages of fabrics, and higher color quality

(Ujiie, H., 2006).

Modern Digital Textile Printing Processes

The definition of digital textile printing, stated by Namwamba (2005) is “the technology of printing on fabric directly from the computer, with no other additional step” (p. 3). For home artisans printing digitally created textile prints, there are two options: large-scale and small-scale. Large-scale printing is done away from the artist’s home, often at a facility specializing in textile printing. While large-scale printing utilizes intricate textile printers, this method of printing textiles can be costly (\$150 per printed yard and above), and the companies may have yardage

minimums, with printing often beginning at five yards. A more affordable and controlled method of printing textiles is at the small-scale level, using a personal inkjet printer. The artist can control the cost of the product (by monitoring the cost of fabrics and treatments) and create the fabric immediately. James (2005) indicated how digital textile printing can change the way an artist creates, by layering stitching, other printing techniques, and the printed fabric. A limitation to printing fabric at home is that a printer has a maximum print size, and that determines the size of the printable fabric.

In order to create digital textile patterns, computer-aided design (CAD) software is needed; Adobe® Photoshop® and Illustrator® are widely used, as there have been numerous plug-ins developed to aid in the creation of textile patterns (Namwamba, 2005). Once the print is created using a design software, it is repeated and scaled to fit the fabric, then printed onto the fabric with the assistance of either a personal inkjet printer or a more advanced textile printing machine utilized for mass produced digitally printed textiles.

Prior to small- and large-scale printing, the fabric must be chemically pre-treated to ensure laundering colorfastness (if the fabric will be transformed into a washable product) and to aid in the binding of the ink to the fabric. In addition, some fabrics need to be stabilized with paper in order to feed through the printer. Certain fabrics, such as ProCoat®, have been pre-treated and are prepared-for-print immediately upon receiving, meaning that the user does not have to pre-treat the fabric in any way. These fabrics are available for purchase from industry vendors and require a post-treatment of steaming to ensure brighter and bolder colors (Namwamba, 2005).

The size of the completed fabric, based upon the maximum printable size, and the quantity of fabric sheets must be determined for each project. Printer inks must be acidic if

printing on protein fabrics, and reactive if printing on cellulosic fabrics (May-Plumlee & Bae, 2005; Yang & Li, 2003; Yuen, Ku, Choi, & Kan, 2005). It can be difficult to match the color that is viewed on the computer screen to what is physically printed. Color matching and testing the inks, by using fabric swatches, is a way to ensure accurate printing prior to printing the fabric used for the final product.

Within the production of small-scale digital textile printing, many terms arise that are related to an inkjet printer. These terms can be narrowed down to the two primary categories of inkjet printing:

1. *Continuous stream inkjet printing*. The printer emits a continuous stream of drops, that either collect on the surface of the paper or fabric to create the design, and the unused drops are gathered in a gutter and recycled;
2. *Drop on demand printing*: Only the ink that is needed is created and used on the surface of the paper or fabric to print the design, thus no extra ink is gathered and recycled (Fralix, 2001).

The original creation of the ink drop, how the ink drop is controlled (either by continuous stream or drop on demand), developing the best resolution for the printed image, and how the image receives its color are the primary factors within the area of inkjet printing (Fralix, 2001). Adobe® Photoshop® and Illustrator® allow the user to define specific resolution standards, and also have the option to alter color choices of an image prior to inkjet printing. If a problem arises once a product has been printed, editing the design on the computer and reprinting the design is a simple solution when compared to hand painted designs (Campbell & Parsons, 2005).

A factor contributing to the end product is laundering. Whether the product should be hand washed, washed in a washing machine, or dry cleaned, the manufacturer of the fabric will

include directions on laundering. If there are no directions (for example, untreated broadcloth), then the user is responsible for the laundering decision. A prior study by the author tested four fabric treatments for wash fastness using AATCC Text Method 61-2A, with evaluation of fabrics using AATCC Evaluation Procedure 1. The fabric treatments included pre-treated Colorfast® fabric sheets, ProCoat® fabric, Bubble Jet Set 2000®/Bubble Jet Rinse® applied to bleached cotton broadcloth and stabilized with freezer paper, and an un-treated cotton broadcloth stabilized with freezer paper. The Colorfast® fabric sheets are prepared-for-printing and must be heat set with an iron to bond the ink to the fabric after printing. ProCoat® fabric is also prepared-for-printing, but must be steamed to develop the colors and to bond the ink to the fabric after printing. Bubble Jet Set 2000® is a liquid solution that un-treated fabric is soaked in for five minutes, stabilized with freezer paper, and printed on. Upon completion of printing, the freezer paper is removed, and the fabric is rinsed in Bubble Jet Rinse® and cold water, to bond the ink to the fabric. While the ProCoat® fabric was evaluated at a higher ranking compared to the other treated fabrics, it was ranked unsatisfactory with an overall rating of 1.65. A ranking of 5.00 indicates no color loss due to laundering and a 1.00 ranking indicates total color loss due to laundering. Therefore, the four fabric treatments evaluated are not recommended for products requiring washing. Future studies should examine colorfastness with hand washing and dry cleaning.

Prior areas of other scholar's research have included: utilizing CAD software to create the print, determining the appropriate form of fabric and inks for use in the product, pre- or post-treatments of the given fabric, and the need for laundering of the final product. While recommendations can be given on CAD software, specific types of printable fabric, or methods

to ensure colorfastness, the individual artist has the final opinion of what will look aesthetically pleasing and work appropriately for their final product.

Children's Education

Within the area of children's play research, Piaget and Inhelder (1966/1969) defined four main categories of play:

1. *Exercise play*. The most primitive form of play, in which the child first repeats a specific activity to understand the practice, then continues to repeat the activity for pleasure;
2. *Symbolic play*. Mimicking external objects as a form of self-expression;
3. *Games with rules*. A development in the child's social life, rules are expressed by other children, often verbally and as part of an agreement;
4. *Games of construction*. Developed from symbolic play, children create objects using their knowledge of previously known symbolic play, or creatively solve problems (p. 59-61).

Piaget and Inhelder (1966/1969) continue to explain that these categories of play begin around year two, with exercise play, and ascend to symbolic play, games with rules, and end with games of construction. Smilansky (1968) further defined the play categories as:

1. *Functional play*. Optional use of objects for repetitive, basic movements (derived from Piaget and Inhelder's *exercise play*);
2. *Constructive play*. Transforming objects in order to design or create another object;
3. *Dramatic play*. Acting out imaginary situations, either acting as another role, or using representative objects;

4. *Games with rules*. Accepting and adjusting to given rules (derived from Piaget and Ihelder's *games with rules*) (p. 79).

Combining functional and constructive play categories from Smilansky (1968) produces a connection appropriate for this project. A child may utilize existing objects (paper dolls and garments, which have been transformed by a user, from an object on paper to a cut-out garment), in conjunction with an imaginary situation expressed by paper dolls. The imaginary context "...give(s) a hint of the concepts of situations which they are calling to mind, as they go through experiences again and again, trying to get a better grasp of situations" (Pickard, 1965, p. 71). Paper dolls act as an outlet for previous and current experiences of the child.

As Chudacoff (2007) states, "[child's] play does have a function that is immediate in its behavioral, social, intellectual, and physical rewards and in the development of the child into an adult" (p. 1). Integrating a child's play object with an educational function creates a positive outcome, "extending the function of schools into children's free time" (Chudacoff, 2007). The educational aspect can be in the form of text or pictures, but must act as a tool for the child to learn from. As a material object, dolls can provide companionship and allow for young girls to act on their maternal instincts (Chudacoff, 2007). Dolls can educate children on events from the past, such as the historical line from American Girl (AG). Each AG doll portrays a fictional character based in a specific period of time in the United States, and accompanying each doll is a series of six books, with accurate information described through fictional storylines (American Girl, 2008). These dolls educate children based on their historically accurate books and clothing, both of which act as learning objects.

While every child learns and plays differently from others, connecting child's play with an educational function is an important aspect in a child's life. By using informative text and

textile prints inspired by the late 1950s/early 1960s to create paper doll clothing, children can produce both constructive and dramatic play. Linking these types of play with the educational aspect of the text encourages learning amongst children.

Chapter 3. Methodology

The focus for this project was the creation of digital textile patterns, inspired by print designs from the late 1950s/early 1960s, Jacqueline Kennedy Onassis, and objects representing the time period. The project follows practice-based methodology. Gray and Malins (2004) define practice-based research as "...where the PRIMARY research is done through producing artefacts [sic], designs, performances, films, etc." (p. 202). The methodology allows for the discovery of new processes or techniques by experimentation; revision of traditional practices in contemporary contexts; and construction of artwork to bring about new understanding and insight through the experience of making (Gray & Malins, 2004). Early ideas of print designs were documented through a reflective journal consisting of notes and sketches. Experimentation of design research ensued for the computer-aided pattern designs, inkjet printing processes, doll garments, and paper doll garment designs.

Chapter 4. Process and Outcomes

Print Designs

Prior to the creation of new textile prints, popular colorways and textile prints from the late 1950s/early 1960s were researched, with themes of: floral, plaids/stripes, abstract, black and white, novelty, and modernist. These colors and prints forged an inspirational path to which the new textile prints would follow. At the beginning of the CAD textile print design process several initial patterns were developed mirroring the floral and geometric themes discussed above. Design elements had to be altered, so that the newly created textile prints reflected the design elements of the time period patterns. Figures 12 and 13 illustrate the before and after of two design element flaws; brush and stroke line problems, and repetition of the design to create a seamless repeat.



Figure 12. Color problems. Notice how the original print on the left was created with bold boundary lines and solid blocks of color. A final pattern used, on the right, was created with blended, muted colors and softened lines.

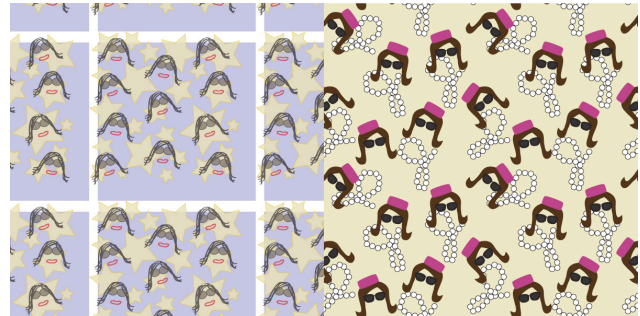


Figure 13. Repeat problems. The print of the left was not correctly designed to ensure a perfect repeat. On the right is a final print used, with alignment of the repeating pattern.

Once these issues were resolved, the patterns began to develop and four central print themes emerged: floral, geometric, Jackie Kennedy inspired, and prints reflective of objects and images of the late 1950s/early 1960s. In relation to prints of the late 1950s/early 1960s, certain themes and colors were removed from the new central print themes: black and white prints, and the colors of royal blue and mint. The designer chose not to include black and white patterns due

to the projected end result for the prints—a print created with various colors might be more visually appealing to young children, as opposed to a basic black and white print. Brighter shades of blues and greens were used, instead of royal blue and mint.

Floral prints

Three floral prints were developed using a blended color concept, as seen in the original textile prints from the earlier time period when watercolor paints were used to design the print. Using a watercolor paintbrush made the individual colors blend together, creating a gradient of color, instead of saturated color blocks. Floral prints 1 and 2 (see Figures 14 and 15, respectively) are motifs using color gradients, blended stroke lines, and different shapes of flower blooms and leaves. Floral 2 also incorporates the shape of a butterfly in the print, similar to the butterfly novelty print (see Figure 9 from the late 1950s/early 1960s) and has a random toss repeat. These two prints are a realistic interpretation of a floral bloom and leaves, while Floral 3 (see Figure 16) is an abstract version of the bloom. The orange, gold, and fuchsia bursts are joined together to create a round blossom, with no apparent leaves or floral outline.

The even and un-even lines of original textile prints from the time period inspired the coordinating prints. The Floral 1 (see Figure 14) coordinating print was created from vertically placed rectangles, with different widths of the outer lines. The check print coordinate of Floral 2 (see Figure 15) was designed with a half-drop repeat method of small squares filled with the solid colors of the main print. Floral 3's (see Figure 16) coordinating polka dot print utilizes circles that are not perfectly round, filled with solid gold, burnt orange, and dark fuchsia, placed upon an olive green background.



Figure 14. Floral 1 print with coordinating stripe and solid colors



Figure 15. Floral 2 print with coordinating check and solid colors

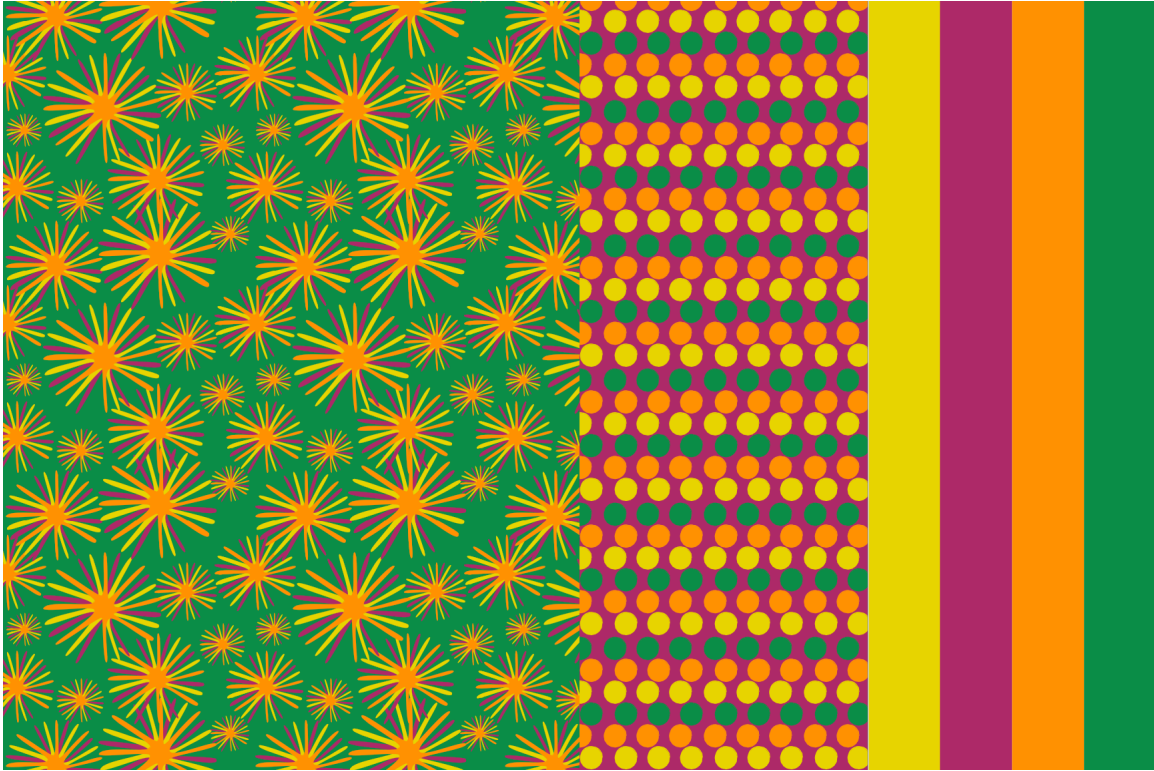


Figure 16. Floral 3 print with coordinating polka dot and solid colors

Geometric prints

Geometric patterns were all designed with linear lines to create motion or different shapes. Geometric 1 (see Figure 17) is an arrangement of four repeated triangles, which creates various areas of interest within the negative and positive spaces; the coordinating diamond print places teal and lilac diamonds upon a cream background. The diamonds were created in an uneven shape, instead of completely symmetrical. Geometric 2 (see Figure 18) features rotating circles, in which the circles were created using a charcoal paintbrush in Adobe® Illustrator®, so they are not perfectly round. The circles are in a ninety-degree rotation grouping to create movement with the pattern and each grouping is repeated using the half-drop repeat. The coordinating print for Geometric 2, a vertical stripe, was also developed with the charcoal paintbrush, so the lines are un-even. The final geometric pattern, Geometric 3, is a vertical wave

pattern. The oval shape is duplicated in two different sizes, with the smaller nestled into the larger (see Figure 19). For Geometric 3, a matching plaid was designed with straight lines, mirroring the straight lines and ninety-degree angles of Frank Lloyd Wright's prints. All three main prints and coordinates were designed using the same colors: lilac, teal, and cream, thus allowing for coordination between the prints.

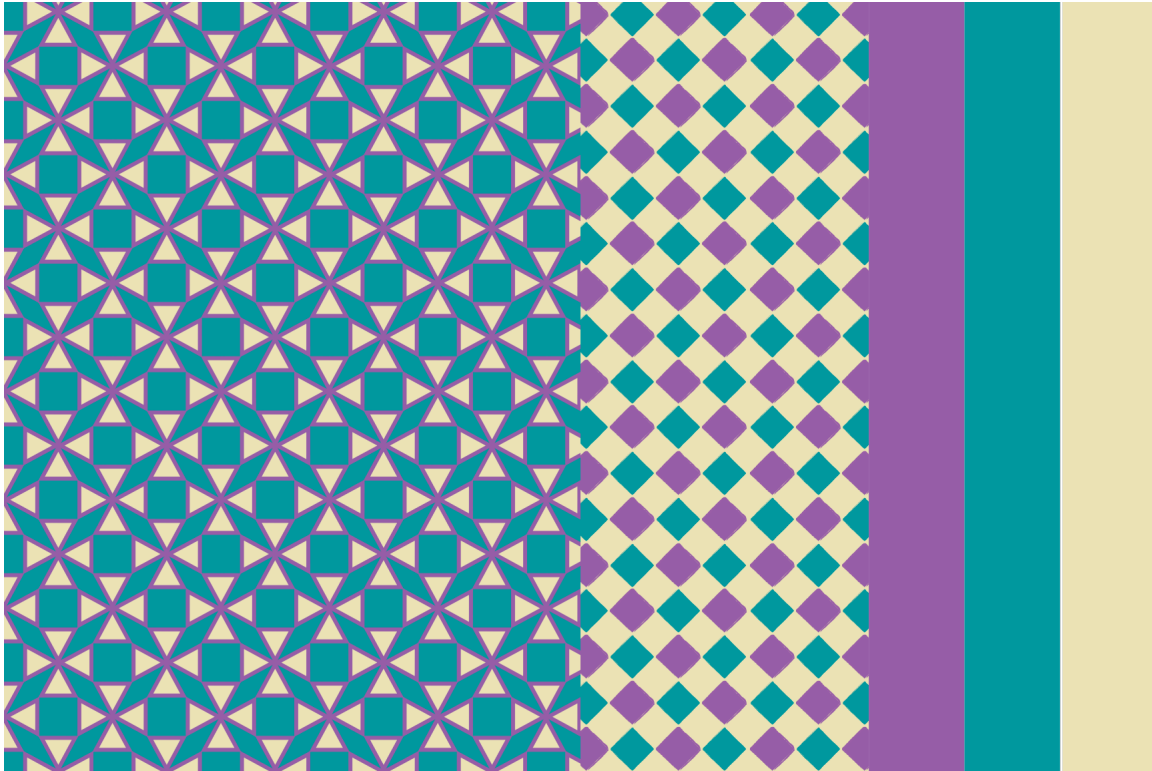


Figure 17. Geometric 1 print with coordinating diamond print and solid colors

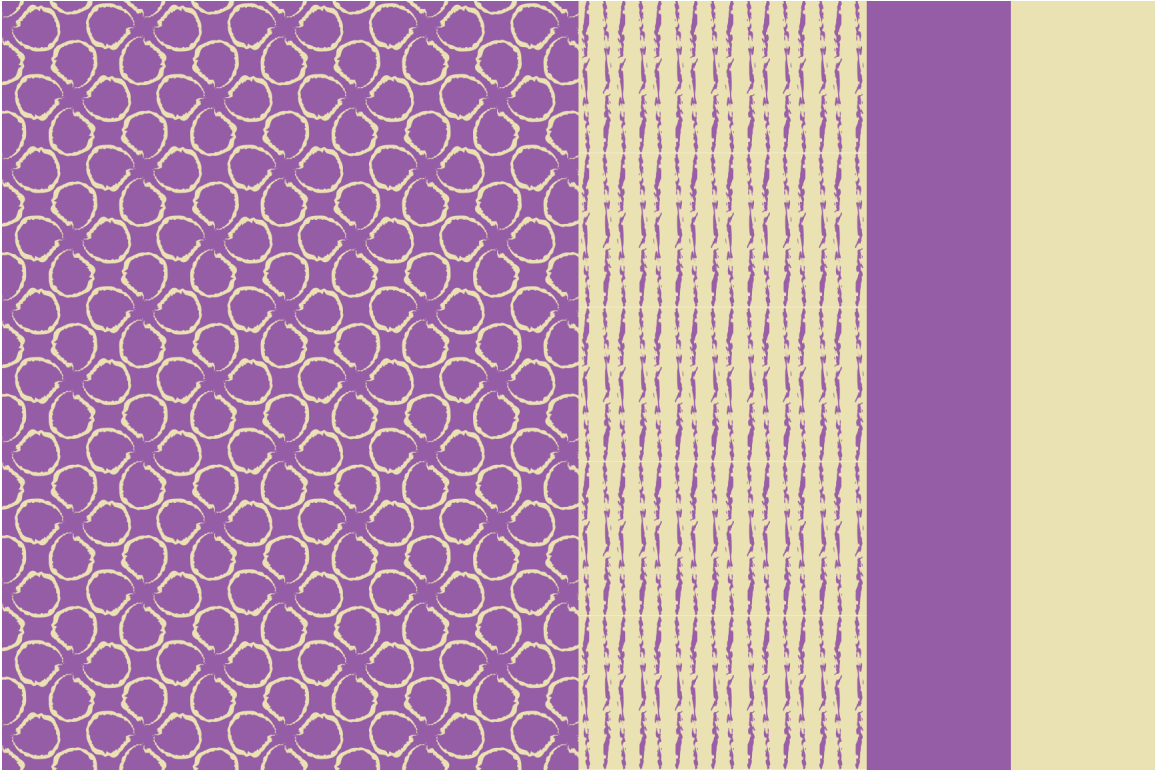


Figure 18. Geometric 2 print with coordinating stripe and solid colors

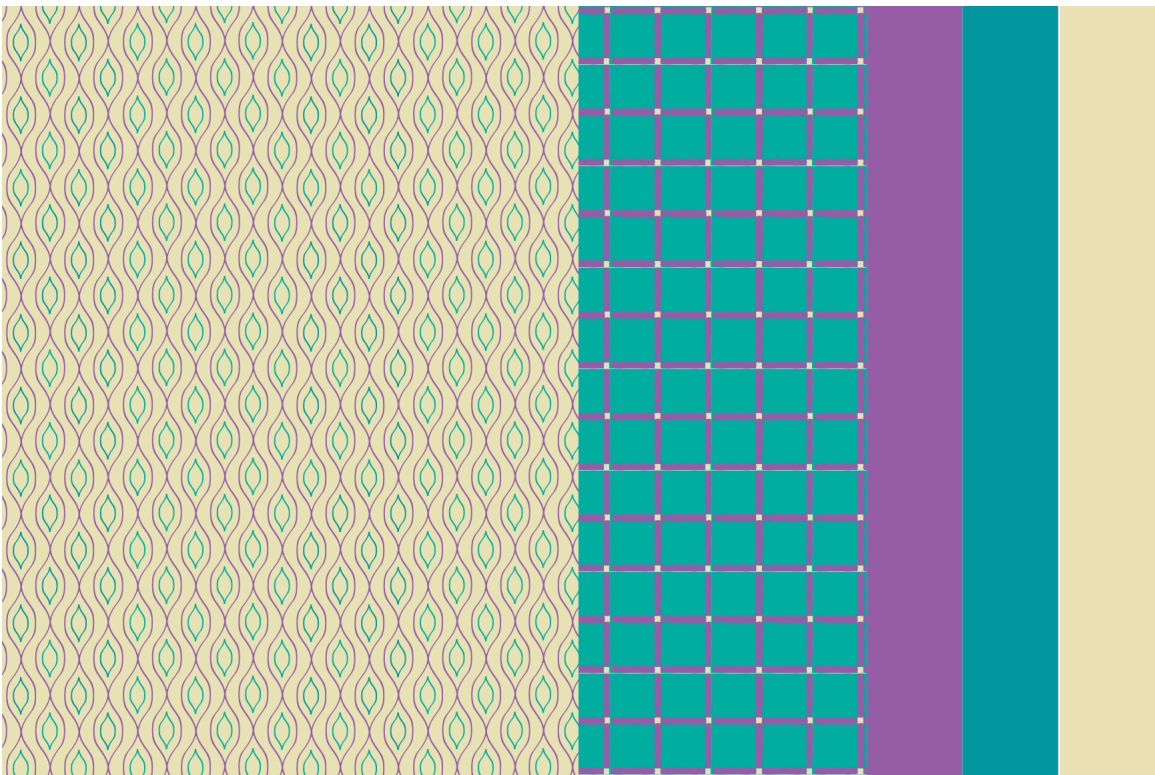


Figure 19. Geometric 3 print with coordinating plaid and solid colors

Jackie Kennedy inspired prints

Inspirational style elements within Jackie's life, such as her wedding dress and her legendary pearls inspired the next series of patterns. Gloves (see Figure 20) is an abstract design incorporating a signature Jackie accessory, her white satin gloves. The gloves are rotated in a forty-five degree circular pattern, with the fingers facing inward. In the background is a vertical stripe pattern, with the lilac color matching the same shade of purple used in all of the geometric prints. Gloves' coordinating plaid was created with straight lines and ninety-degree angles. The second print, Jackie, is an abstraction of Jackie's hairstyle, pillbox hat, and sunglasses. Also integrated into the pattern are her pearls, intertwined into a capital "J", for Jackie. The dark fuchsia used for the pillbox hat was also used within the Floral 2 print (see Figure 21). These elements were arranged in a random toss repeat. Similar to the coordinating print of Floral 3, the coordinating print for Jackie is a blend of cream and chocolate brown polka dots, placed on a dark fuchsia background. Wedding Dress, the final Jackie inspired print, is the silhouette of Jackie's wedding dress rotated to create the repeat (see Figure 22). This print also color coordinates with two of the floral patterns, Floral 1 and 2, and has a matching vertical stripe designed with un-even lines.

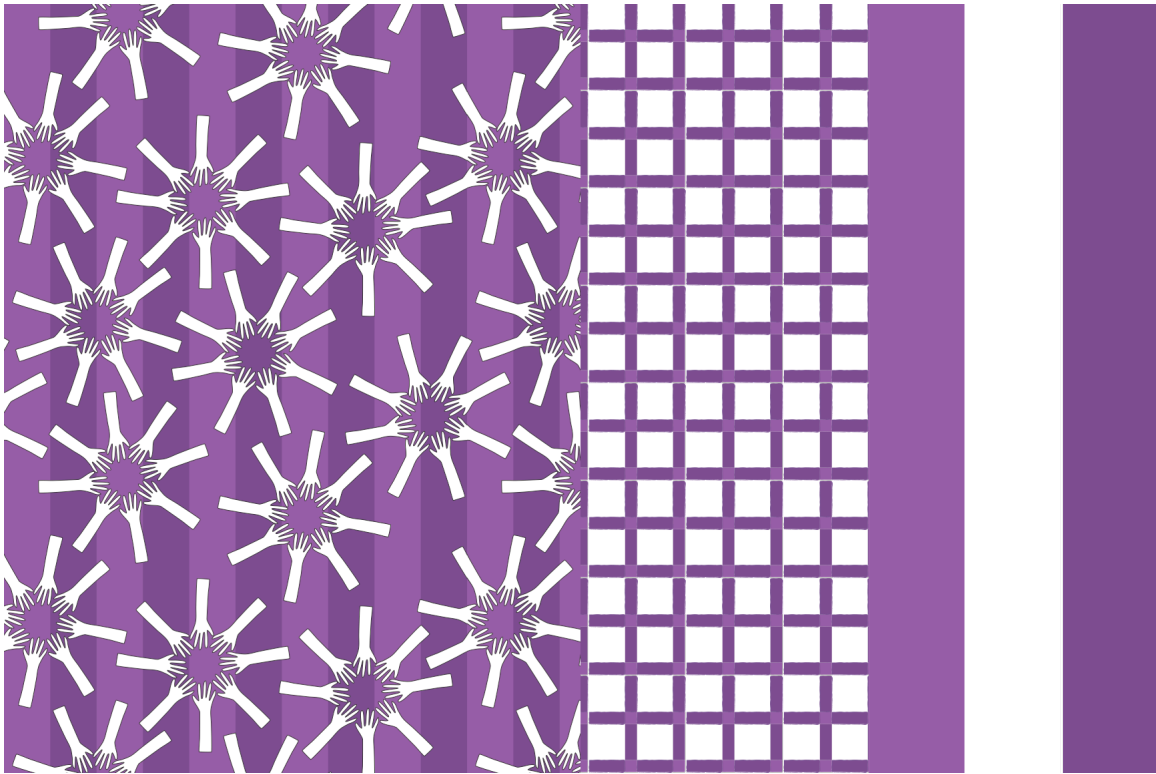


Figure 20. Gloves print with coordinating plaid and solid colors

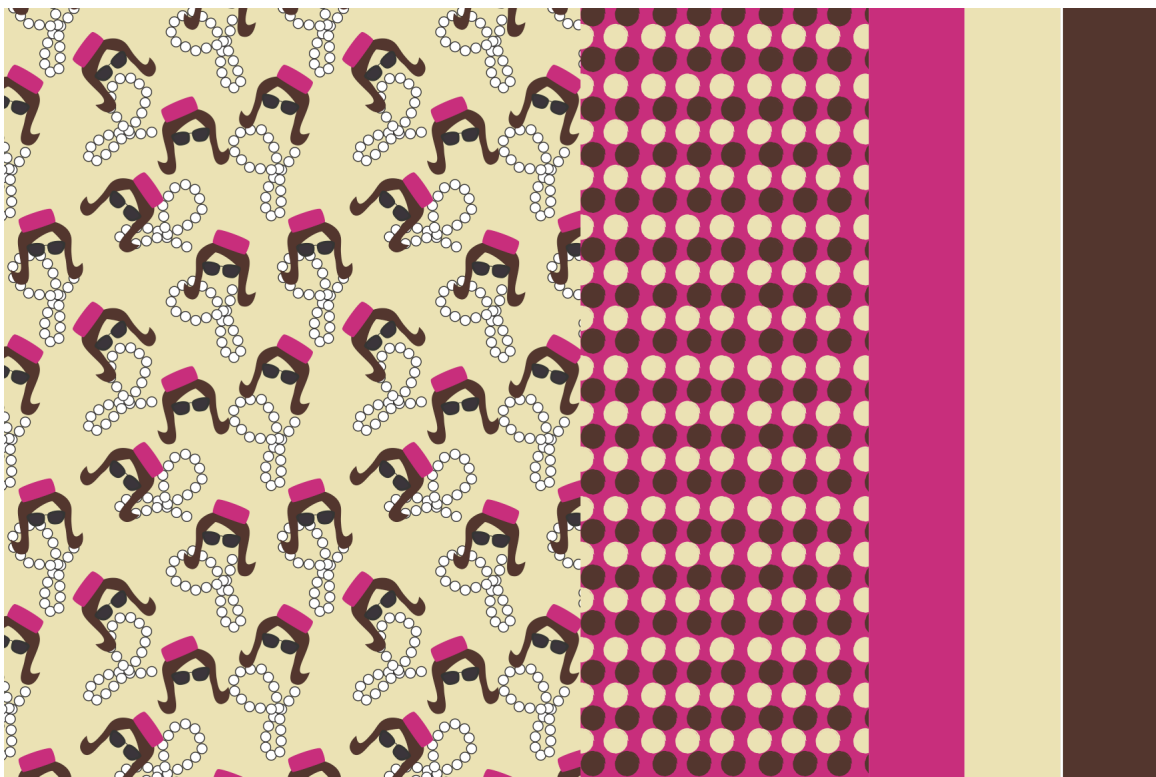


Figure 21. Jackie print with coordinating polka dot and solid colors

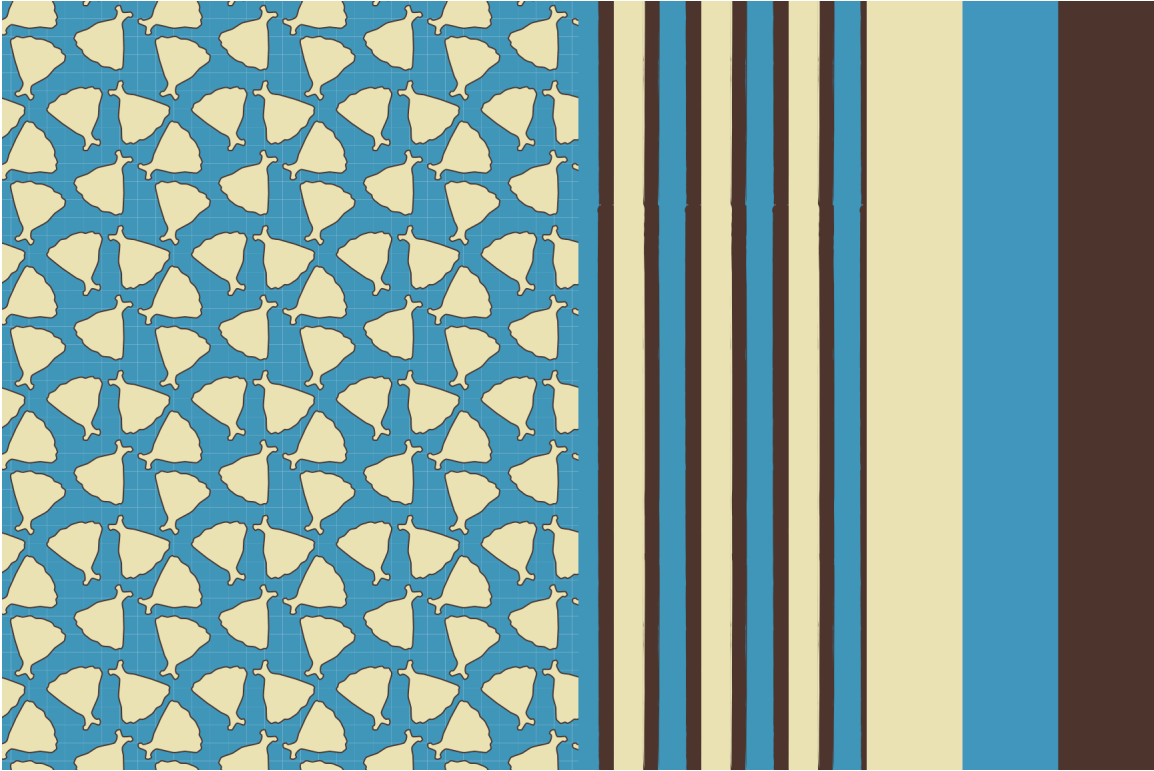


Figure 22. Wedding Dress print with coordinating stripe and solid colors

Prints inspired by objects of the time period

In addition to Jackie and the textile prints of the time, objects that reflect the time period were used for print inspiration. The time period prints were created using photographs of actual objects from the late 1950s/early 1960s (see Figures 23, 24, and 25). The images were cropped to a small section, re-colored, and manipulated to create the background, or the main object was re-drawn and used as the focal point of the new print.



Figure 23. Advertisement for a popular music record¹²



Figure 24. Retro dining set¹³



Figure 25. Bicycle produced during the late 1950s¹⁴

To create Bicycle, a wheel spoke section of the original photograph was changed to a pink and white color, and repeated horizontally and vertically to create the background. Then, the original bicycle was re-drawn and layered with stars onto the background (see Figure 26). A coordinating plaid was created, involving the main colors from Bicycle and the star shape. The second theme print, Chair, was designed using a curved edge of the table, re-colored to a bright fuchsia (the original silver from the table was retained), and also repeated horizontally and vertically for the background. The chair, also sketched from the original photograph, is slightly transparent in the pattern, which creates depth in the print (see Figure 27). This pattern matches Floral 3, using the same dark fuchsia color in both prints. To coordinate with the Chair print, a horizontal stripe was developed with lines of variable widths. Record is the last print, and is based on an advertisement for a popular musical record. Three musical notes were grouped together with a vinyl record drawing and layered on a solid color background with a five line staff running through it (see Figure 28). To coordinate with the Record print, a herringbone pattern was designed utilizing the main colors within the main print. Each of the three main prints were repeated with the random toss method.

¹² From www.solcomhouse.com

¹³ From www.retrotoogo.com

¹⁴ From www.mrmartinweb.com/bicycle.html

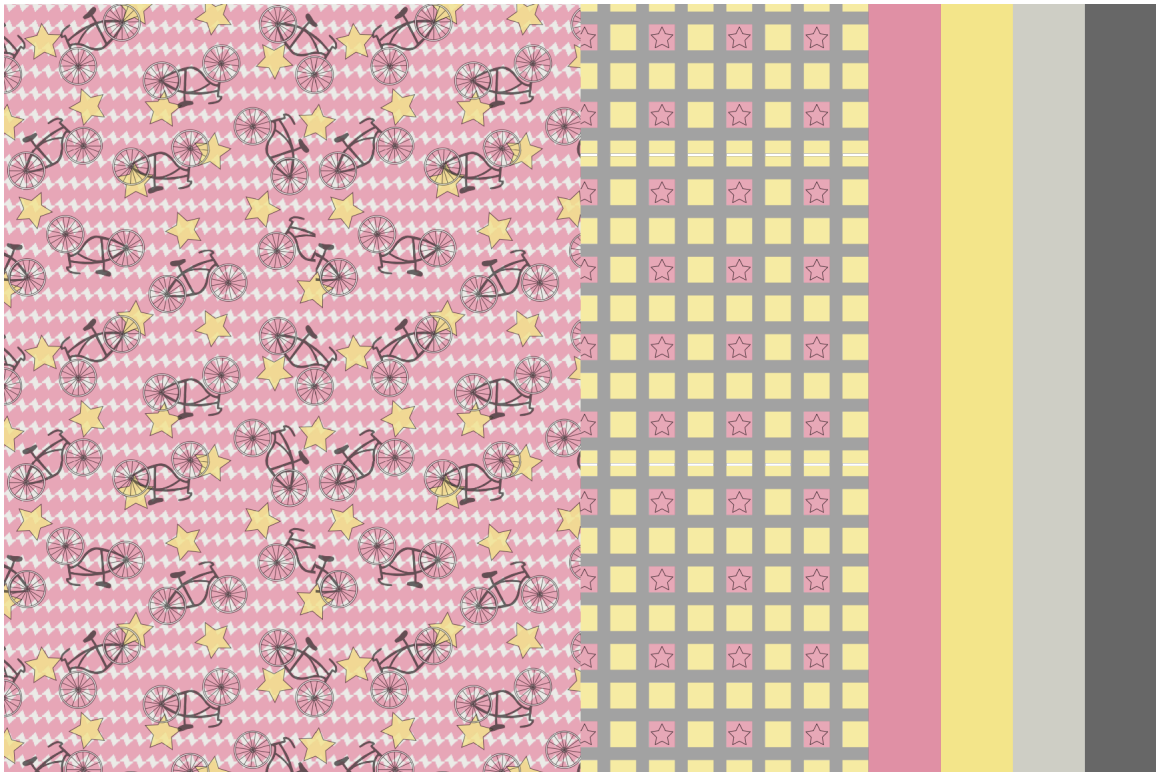


Figure 26. Bicycle print with coordinating plaid and solid colors



Figure 27. Chair print with coordinating stripe and solid colors

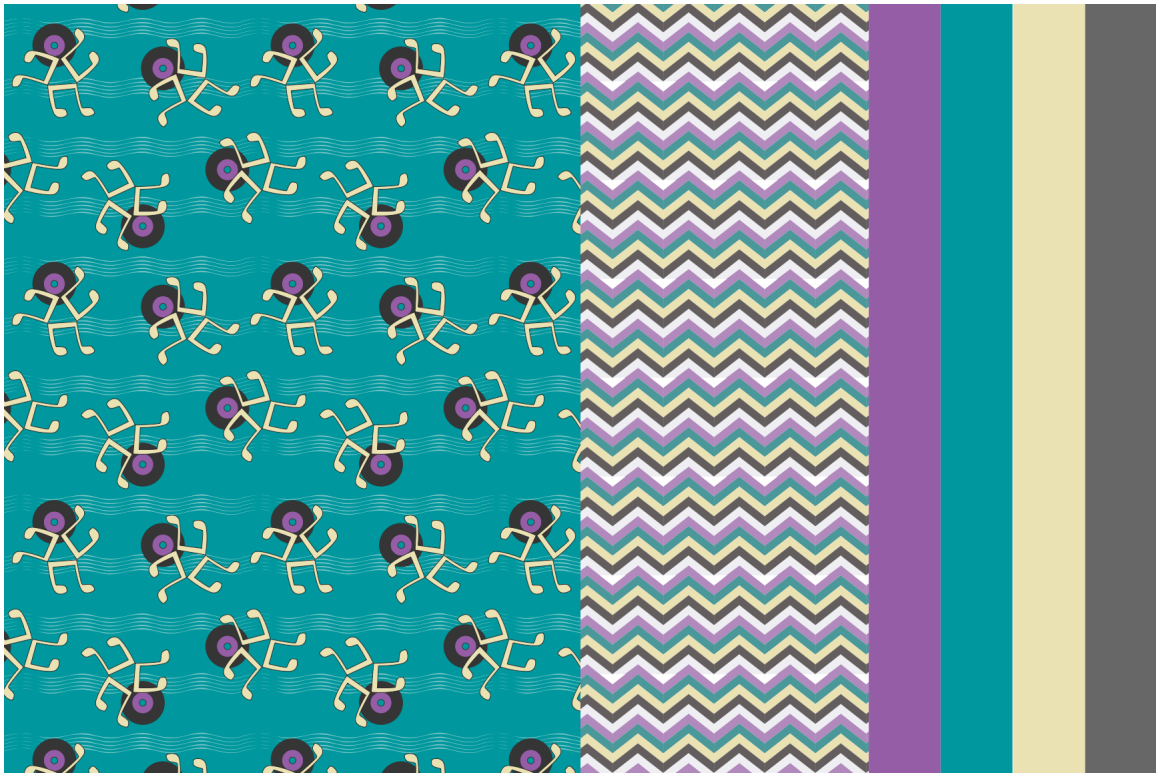


Figure 28. Record print with coordinating herringbone print and solid colors

Paper Dolls and Paper Doll Garments

The paper doll was designed to be proportional to educational dolls such as American Girl; aesthetically accurate to the look of the late 1950s/early 1960s, while maintaining its appeal to young girls. Two eight-inch versions of the doll were created to represent the look of Jackie Kennedy through their accessories, lighter skin tone, brown eyes, and brunette hairstyle. One doll is wearing a pearl necklace and earrings, sunglasses, and black Mary Jane shoes, with the other doll wearing no accessories and white Mary Jane shoes. Both dolls have an attached undergarment (see Figure 29). The dolls are pre-cut, so the children do not have to cut out small details connected to the doll. Encouraging constructive and imaginative play, children can mix-and-match the clothing with accessories on the paper dolls, creating various styles.

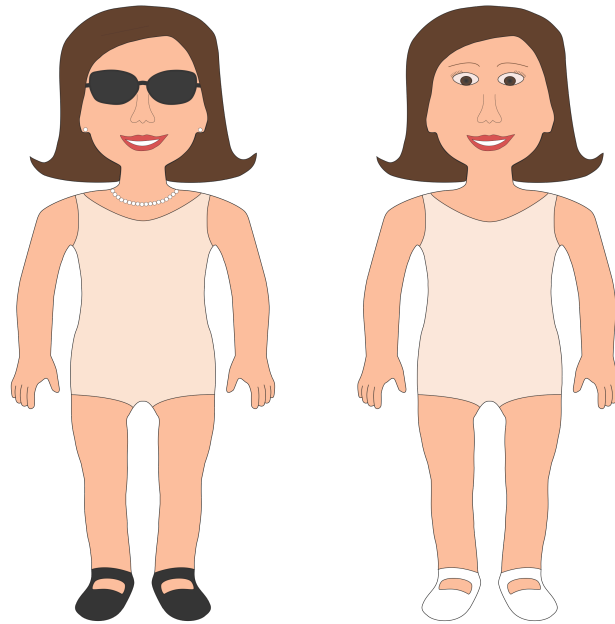


Figure 29. Two paper dolls

Garments representing the time period were developed and digitally filled with the different textile prints and solids. For the garment silhouettes, popular clothing choices from the time period were selected: an evening gown with cap sleeves; an empire waist dress, with a sash tied at the waist; a knee-length skirt with coordinating button-up sweater; a v-neck swimsuit, with low-cut leg openings; pedal pusher shorts with a coordinating boat-neck, sleeveless blouse; and a two-piece pajama set, with long pants and a short-sleeve, button-up top. Accessories, white gloves and a pillbox hat, were also designed. Figures 30, 31, and 32 show the six garments, filled with the designed geometric prints.

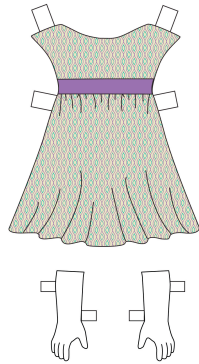
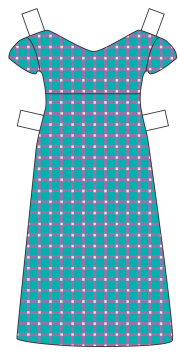


Figure 30. Evening gown, empire-waist dress, and white gloves

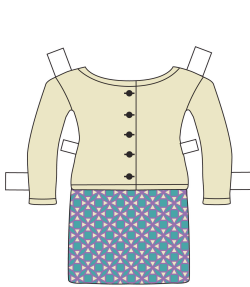


Figure 31. Two-piece sweater suit, swimsuit, and pillbox hat

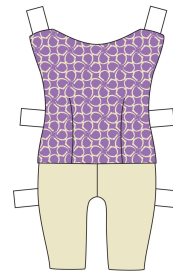
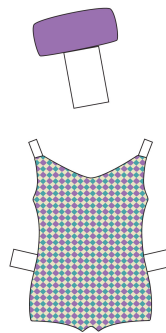
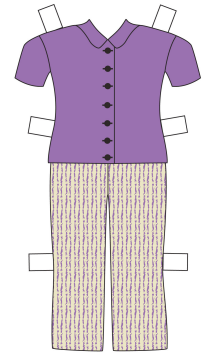


Figure 32. Pedal pusher short, boat-neck blouse, and two-piece pajama set



Using the outlines as cutting guides, children can cut out and place each separate garment onto a paper doll (the garment is attached to the doll using small tabs connected to the outline and the tab connected to the pillbox hat slides through a slit cut through the paper doll's hair).

A booklet was created to explain the designed prints and garments, written with text and phrases that would appeal to children. Phrases such as, “they also wore one-piece swimming suits—like you do!” and “do you have any clothing that would match these colors?” connect to the children by making them interact with the text. Other phrases like “can you find the records, chairs, and bicycles on the paper doll clothing?” and “can you find the flower blooms, leaves, and butterflies?” direct the children to find objects within the prints. See Appendix E for the entire booklet.

Doll Clothing

Another visual outcome was the utilization of digitally printed fabric to create a garment for a three-dimensional 18-inch doll. Using Simplicity® pattern #3929, un-treated, white broadcloth fabric was used in the test construction of a short-sleeved blouse tucked into a full skirt with a wide cummerbund. This ensemble was inspired by the popular full skirt silhouette from the late 1950s/early 1960s, and is representative of what young girls and their dolls would

have worn during this time. A newly designed digital textile print, Floral 1, and the cornflower blue coordinating solid color were chosen for the doll's clothing to be displayed within the exhibit (see Figure 33). This specific pattern and solid color were chosen for its impact in the final display, with the bold, red flowers in the print making the doll clothing noticeable from a distance, and the cornflower blue providing a lighter contrast in relation to the bold print. ProCoat® fabric, which is pre-treated, pre-stabilized and thus ready for digital printing, was chosen for printing the floral print and solid blue onto the fabric.

After a test construction of the skirt, blouse, and cummerbund, the Simplicity® pattern was placed onto pieces of paper to determine the final quantity of fabric pieces needed. The doll's clothing required three 11" x 17" pieces and one 8.5" x 11" piece for the skirt and blouse, printed with the Floral 1 print. The cummerbund required one 11" x 17" piece, printed with the cornflower blue. Once the quantity of fabric pieces was determined, the fabric was fed into the printer (fabric side down), printed with the Floral 1 pattern, and allowed to cure for 24 hours. After 24 hours, the paper was removed from the fabric and the fabric was constructed into the doll's clothing. The ProCoat® fabric required no treatment prior to printing; however, steaming the fabric after printing was recommended for development of bright colors. The designer chose not to steam the fabric prior to construction of the clothing, due to the use of muted colors during the late 1950s/early 1960s. The ProCoat® fabric is readily available for home studio artists, as it was purchased from an on-line fiber art supply store.



Figure 33. 18-inch doll modeling short-sleeved blouse, full skirt, and solid color cummerbund. Clothing was created using Simplicity® pattern #3929 and ProCoat® fabric.

Exhibition

The project exhibit displayed the outcomes of the project. Final outcomes were: paper panels of the new patterns (see Figure 34), paper dolls and the booklet containing the paper doll garments, and doll clothing constructed from home-based printed fabric. In addition, two inspiration boards were created.

The paper panels were displayed with their respective pattern coordinates for each selected theme. Figure 12 shows the format that was used for display purposes, with the final size of 12" x 8". Within the four themes, there were three main prints designed, thus totaling 12 paper panels.

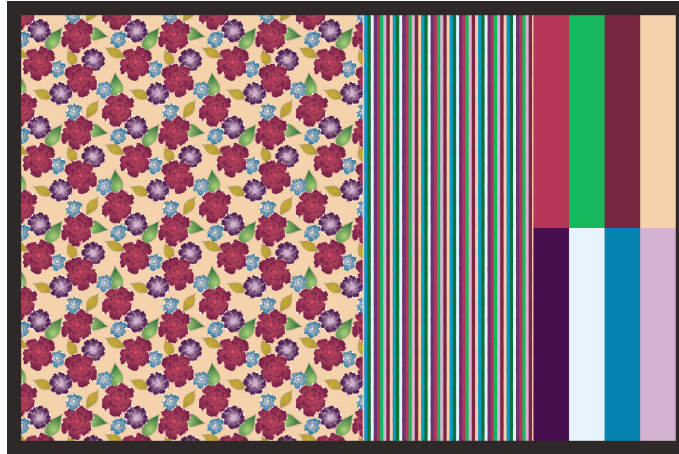


Figure 34. Format of paper panels in exhibition

Inspirational boards were designed for the exhibit to visually present the design process for the Jackie Kennedy inspired prints and the time period object inspired prints. The “Jackie Kennedy” board (see Figure 35) shows two images of Jackie’s wedding gown with the illustration created for the Wedding Dress print. The illustration of the gloves used for the Gloves print is shown in a grouping of images with Jackie wearing her signature white, satin gloves. The abstraction of Jackie’s hairstyle, pillbox hat, and sunglasses are also shown, with photographs of Jackie wearing the hat and sunglasses. An uppercase “J” letter, which was used in the designed Jackie print, is shown as well. To aid the viewer in making the connection between specific prints and their inspiration, the board was referenced with the printed paper panels’ descriptive text.



Figure 35. Jackie Kennedy inspirational board

The “Images” board (see Figure 36) followed the same format as the “Jackie Kennedy” board by presenting the time period specific images and the resulting motifs. The “Images” board was also referred to in the prints’ descriptive text. Each board has a final size of 24” x 16”.

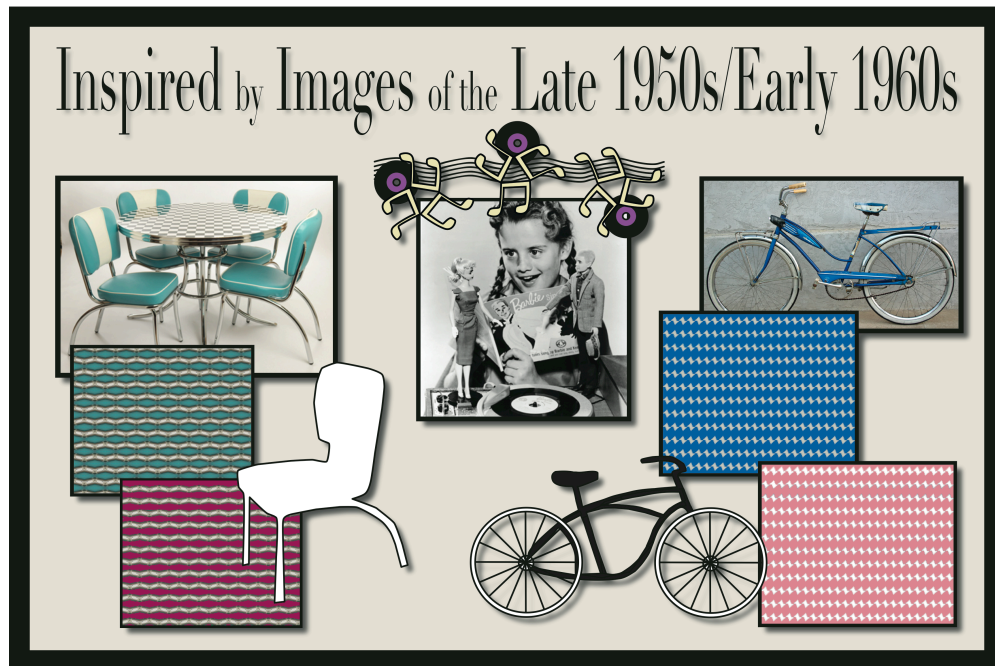


Figure 36. Time period specific objects inspirational board

Figure 37 shows the completed exhibit, located in the display window of Hoffman Lounge of Justin Hall on Kansas State University's campus. Mounted against the glass are the four themes of prints, with three main prints in each theme. Under each theme is a paragraph of text explaining the design process, colors used in the design, and inspirational elements. Two pedestals were used within the exhibit, with the left pedestal (24" x 24" x 36") showcasing a page of introductory text about the project, the two paper dolls wearing garments, and various pages from the children's booklet. Placed on top of the right pedestal (24" x 24" x 30") is the 18-inch doll wearing the created dress, the children's booklet, and various pages from the booklet. Mounted to the front of each pedestal are more pages from the children's booklet. The Jackie Kennedy inspired board is hanging on the upper left, and the time period inspired image board is hanging on the upper right.



Figure 37. Completed exhibit

Reflection

Researching textile prints and colors from the late 1950s/early 1960s was an informative process. Adobe® software is a commonly used program by many designers on a regular basis. As the software was unavailable during the late 1950s/early 1960s, designers had to paint their planned patterns. It was interesting to see how the artist conveyed flowers, created lines as an illusion in certain prints, and blended two colors together within areas of the motif. The other areas of research, such as children's education and modern digital textile printing processes, were informative as well, and were constantly considered as the prints, paper dolls, and paper doll garment booklet were being developed. Whether the colors and shapes of the prints would be visually appealing to children, the size of the garments for children to cut out, and if the text would be understood by the children were all considered during the design process. The research allowed the designer to appropriately and accurately create the designs on a historical and educational level.

During the design process, obstacles and challenges had to be overcome to create the final products. Using a modern method to create historically based prints was a difficult journey, but was full of newly learned techniques, procedures, and a personal accomplishment. At the beginning of the print design process, many prints were created that did not represent prints from the time period, and were discarded or revised to create another print. Overall, approximately forty prints were created that evolved into the twelve main prints for the project. Comparing the initial prints to the final twelve prints showed a vast improvement in the designer's aesthetic and technique within the CAD software program. Having a better understanding of the program and personal aesthetic was an achieved accomplishment for the designer.

The opening reception of the exhibition was held from 3:00 to 7:00 PM, Monday, April 20, 2009. Over the four hours, approximately fifty people attended, including one child, aged 7. At the reception, it was an option for the guests to cut out a few of the paper doll garments, and place them on the pre-cut paper dolls. It was observed that the adults who chose to cut out the garments cut precisely on the cutting guides, keeping the garments whole. The one child, who cut out clothing for approximately an hour, was very creative in her cutting techniques. At first, she used the outline as a cutting guide, cutting out two or three whole outfits. Then, she became creative and would shorten the length of the dresses and skirts, cut off the arms of the sweater to make it sleeveless, or would separate the skirt from the sweater (or other two piece garments). This type of creativity from a child validated the entire design process. She constructively played with existing objects, to create an entirely new item. She would also “walk” her paper doll across the table, and have it interact with another paper doll she had previously dressed. While it was interesting to watch the adults play with the paper dolls and paper doll garments, it was exciting and informative to watch the child play, knowing that the child was aged within the original target market and enjoying the paper dolls. She verified the entire process, showing that children are interested in this type of play. However, it is also recognized the goal of observing the children was not fully met. Having more children interact with the paper dolls may have provided further insight and recommendations for improvement.

At the conclusion of the project, areas for future research were discovered. Utilizing the same principles of this project, studies of children playing with the paper dolls and paper dolls garments could be conducted. Two test groups of children, aged 7 to 10, would be formed. With one group given the booklet (including the educational text and paper doll garments) and the other group only being told about and shown garments from the time period, but not interacting

with the paper dolls. Then ask the children to recall the prints and/or garment styles, comparing the information between the two groups. It could be hypothesized that the children who had access to the booklet and paper dolls would be able to recall the information with greater detail than the children who did not interact with the paper dolls.

Another recommendation is to further investigate the colorfastness properties of fabric utilized in digital textile printing. Previously tested fabric treatments proved unsatisfactory for home laundering standards, due to the ranking of 1.65 on a 5.00 scale. For studio artists creating washable designs, this research would be beneficial and informative.

Overall, this project was very enlightening and educational on both an academic level, as well as on a personal level. The research conducted was intriguing, the designs were exciting to see develop, and the exhibition was a success within the department and college. Valuable information was learned, and watching the project mature from beginning to end was an exciting and thrilling experience. It can be hoped that the information from this project brings ideas to others for future practice-based research and for children to learn about the past, in an exciting and creative way.

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Appendix A. Time Line

October 8, 2008	Initial meeting to discuss first version of Design Project Proposal
October 27, 2008	Second version of Proposal due
November 29, 2008	Third version of Proposal due
December 6, 2008	Fourth version of Proposal due
December 8, 2008	Proposal distributed to committee members
December 16, 2008	Proposal meeting with committee members
January 5, 2009	Initial meeting to discuss test prints
January 26, 2009	Discussion of prints
February 2, 2009	Discussion of prints
February 9, 2009	Discussion of prints
February 16, 2009	Discussion of prints
March 9, 2009	Discussion of prints
March 30, 2009	Discussion of prints
April 7, 2009	Approval to Schedule Final Examination form due to Kansas State University Graduate School
April 9, 2009	First version of MS Report due
April 16—17, 2009	Exhibition set-up
April 18—May 20, 2009	Exhibition
April 20, 2009	Opening of exhibition reception for invited guests
April 23, 2009	Final copy of MS Report distributed to committee members
May 7, 2009	Defense of Project to committee
May 15, 2009	Copy of electronic thesis due to Graduate school for Spring 2009 graduation

Appendix B. Budget

\$20	Purchase of books
\$100	Purchase of supplies (ink, paper, fabric)
\$300	Exhibition budget (poster boards, large scale printing)
\$100	EDTR submission fee
\$45-\$65	Copyright fee

Appendix C. Plan for University Exhibition Place and Dates

Dates for the exhibit are April 18 through May 29, 2009. The project will be exhibited in the Hoffman Lounge display window, on the East side of Hoffman Lounge. This size of this window space is opportune for the amount of object to be displayed; printed textile patterns, eight inch paper dolls, an 18-inch doll modeling an outfit inspired by the late 1950s/early 1960s, and inspiration boards will complete the exhibition. Approximately three weeks after opening day, the defense of the project will occur, allow the previous and remaining weeks of the exhibition to be solely used for public viewing.

Appendix D. Plan for Submission to Juried Venue

Upon completion of my MS Report, I plan to submit this project to the International Textile and Apparel Association (ITAA) for a poster board presentation, for the annual meeting for 2010. Following is the required two-page abstract and four-page educational paper required for submission, including graphics and images.

Digital Textile Patterns Inspired by Themes from the Late 1950s/Early 1960s

Purpose, Rationale, and Methodology

The purpose of this presentation is to show newly designed textile patterns inspired by the late 1950s/early 1960s. Paper dolls were created, and the patterns aided in the development of paper doll clothing and the construction of fabric utilized of a garment for an 18-inch, three-dimensional doll. The rationale for this project is using the textile patterns and paper dolls to educate children through play.

The project follows practice-based methodology. Gray and Malins (2004) define practice-based research as "...where the PRIMARY research is done through producing artefacts [sic], designs, performances, films, etc." (p. 202). The methodology allows for the discovery of new processes or techniques by experimentation; revision of traditional practices in contemporary contexts; and construction of artwork to bring about new understanding and insight through the experience of making (Gray & Malins, 2004).

Process and Outcomes

Textile prints. In the late 1950s/early 1960s, textile prints were hand drawn, creating uneven lines and blended colors. Popular print categories during this time were: floral, plaids/stripes, abstract, novelty, black and white, and modernist (Meller & Elffers, 1991; Skinner, 1998). For the newly designed textile patterns, four categories were developed (floral, geometric, Jacqueline Kennedy inspired, and inspiration from time period specific images), with three main prints in each theme. These prints were designed using Adobe® Illustrator® and Photoshop® software, and include use of color gradients and hand traced elements within each print, reflective of original textile prints from the late 1950s/early 1960s. See Figures 1 and 2 for the main prints.



Figure 1. From top: Floral 1, Floral 2, Floral 3, Geometric 1, Geometric 2, Geometric 3



Figure 2. From top: Jackie, Gloves, Wedding, Chair, Bicycle, Record

Paper dolls and paper doll clothing. The twelve prints were utilized in the development of paper doll clothing. Paper doll clothing was designed using Adobe® Illustrator® software, and features nine garments: a full-length evening gown; a short dress with full skirt; a long-sleeved sweater attached to a short skirt; a swimsuit; a sleeveless, boat-neck blouse attached to pedal pusher shorts; and pajama bottoms attached to a short-sleeved blouse. Also included within the paper doll garments are white gloves and a pillbox hat. The garments are connected to small

tabs, with the hat connected to a tab that slides through the paper doll's head. Inspired by Jacqueline Kennedy, the paper dolls are 8-inches tall and feature a lighter skin color and a brunette hair style, with one of the dolls dressed with sunglasses, a pearl necklace and earrings, and black Mary Jane shoes (the other doll does not have these accessories, and is wearing white Mary Jane shoes). The twelve main textile prints were used to fill the paper doll clothing, creating twenty-four different ensembles. Accompanying the paper dolls and paper doll clothing are phrases and text that would appeal to children. Phrases such as "they also work one-piece swimming suits—like you do!" and "can you find the records on the paper doll clothing?" encourage children to interact with the dolls.

Printed doll clothing. Fabric was also printed on using a home-based inkjet printer, and used to construct a garment for an 18-inch, three-dimensional doll. Using a pre-designed Simplicity® pattern, a short-sleeved boat-neck blouse, full skirt, and cummerbund were constructed using ProCoat® fabric. This fabric was chosen for its ability to be printed on directly from an inkjet printer, with no additional pre-treatments required. Floral 1 was chosen as the textile print for the blouse and skirt, with a cornflower blue solid color chosen for the cummerbund. Approximately four pieces of fabric, measuring 11" x 17" and one measuring 8.5" x 11" were used to construct the three garments.

Findings

As Chudacoff (2007) states, "[child's] play does have a function that is immediate in its behavioral, social, intellectual, and physical rewards and in the development of the child into an adult" (p. 1). Integrating a child's play object with an educational function creates a positive outcome, "extending the function of schools into children's free time" (Chudacoff, 2007). Two types of play defined by Smilansky (1968) are functional play and constructive play. Functional play is the optional use of objects for repetitive and basic movements, and constructive play involves transforming objects in order to design or create another object. While every child learns and plays differently from others, connecting child's play with a educational function is an important aspect in a child's life. By using informative text and textile prints inspired by the late 1950s/early 1960s to create paper doll clothing, children can produce both constructive and dramatic play. Linking these types of play with the educational aspect of the text encourages learning amongst children. Future research can be conducted on the historical understanding of the textile prints, by conducting focus groups aimed at children ages 7-10. It could be hypothesized that the children who had access to the booklet and paper dolls would be able to recall the information with greater detail than the children who did not interact with the paper dolls.

References

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Digital Textile Patterns Inspired by Themes from the Late 1950s/Early 1960s

Meagan L. Pickett, Kansas State University, Manhattan

Sherry J. Haar, Kansas State University, Manhattan

textiles, education, children, printing

Introduction

During the late 1950s/early 1960s, textile colors and patterns in the United States were reflective of the conservative and traditional atmosphere that represented the majority of Americans; subdued colors found in nature were predominately used in apparel and home interiors, and the patterned motifs were simple and charming in their design. Basic floral, striped, and abstract patterns were the most common textile prints; solid-colored fabrics, such as various shades of green and blue, ivory, lilac, and orange were also popular within both apparel and interiors (Skinner, 1998). Within this time period, the technology to create computer-generated patterns had not been established, so patterns were drawn by hand and a mathematical method was used to ensure proper repetition of the print onto the fabric yardage (Skinner, 1998). Today, the majority of textile patterns are computer generated and printed with intricate and advanced textile printers, eliminating the need for hand drawn designs.

During the late 1950s/early 1960s, the fashionable impact of Jacqueline (Jackie) Kennedy on the American public was readily seen through her apparel and accessory choices. Box cut suits, white gloves, and a single strand pearl necklace were constant items within Jackie's ever-evolving wardrobe, and are the defining elements of Jackie's style (Mulvaney, 2001). While these specific items were integral to Jackie's wardrobe, they were also historical and visual representations of the late 1950s/early 1960s.

Visual representations of history have been used in the education of young girls. The American Girl® dolls are an example of representing periods in American history through the dress, accessories and story of each doll (American Girl®, 2008).

Purpose and Rationale

The purpose of this presentation is to show newly designed textile patterns inspired by the late 1950s/early 1960s. Paper dolls were created, and the patterns aided in the development of paper doll clothing and the construction of fabric utilized of a garment for an 18-inch, three-dimensional doll. The rationale for this project is using the textile patterns and paper dolls to educate children through play.

Methodology

The project follows practice-based methodology. Gray and Malins (2004) define practice-based research as "...where the PRIMARY research is done through producing artefacts [sic], designs, performances, films, etc." (p. 202). The methodology allows for the discovery of new processes or techniques by experimentation; revision of traditional practices in contemporary contexts; and construction of artwork to bring about new understanding and insight through the experience of making (Gray & Malins, 2004).

Process and Outcomes

Textile prints. In the late 1950s/early 1960s, textile prints were hand drawn, creating uneven lines and blended colors. Popular print categories during this time were: floral, plaids/stripes, abstract, novelty, black and white, and modernist (Meller & Elffers, 1991; Skinner, 1998). For the newly designed textile patterns, four categories were developed (floral, geometric, Jacqueline Kennedy inspired, and inspiration from time period specific images), with three main prints in each theme. These prints were designed using Adobe® Illustrator® and Photoshop® software, and include use of charcoal brushes, color gradients, and hand traced elements within each print, reflective of original textile prints from the late 1950s/early 1960s. Two of the prints that were inspired by images from the time period were designed by cropping a photograph of a representative object, then re-coloring and manipulating the cropped image to produce a background. Then, the original object was re-drawn and placed upon the background. See Figures 1 and 2 for the main prints, with their coordinating prints and solid colors.

Insert Graphics 1 and 2 about here.

Paper dolls and paper doll clothing. The twelve prints were utilized in the development of paper doll clothing. Paper doll clothing was designed using Adobe® Illustrator® software, and features nine garments: a full-length evening gown; a short dress with full skirt; a long-sleeved sweater attached to a short skirt; a swimsuit; a sleeveless, boat-neck blouse attached to pedal pusher shorts; and pajama bottoms attached to a short-sleeved blouse. Also included within the paper doll garments are white gloves and a pillbox hat. The garments are connected to small tabs, with the hat connected to a tab that slides through the paper doll's head. Inspired by Jacqueline Kennedy, the paper dolls are 8-inches tall and feature a lighter skin color and a brunette hair style, with one of the dolls dressed with sunglasses, a pearl necklace and earrings, and black Mary Jane shoes (the other doll does not have these accessories, and is wearing white Mary Jane shoes). The twelve main textile prints, and their coordinating print and solid colors were used to fill the paper doll clothing, creating twenty-four different ensembles. Accompanying the paper dolls and paper doll clothing are phrases and text that would appeal to children. Phrases such as “they also work one-piece swimming suits—like you do!” and “can you find the records on the paper doll clothing?” encourage children to interact with the dolls.

Printed doll clothing. Fabric was also printed on using a home-based inkjet printer, and used to construct a garment for an 18-inch, three-dimensional doll. Using a pre-designed Simplicity® pattern, a short-sleeved boat-neck blouse, full skirt, and cummerbund were constructed using ProCoat® fabric. This fabric was chosen for its ability to be printed on directly from an inkjet printer, with no additional pre-treatments required. Floral 1 was chosen as the textile print for the blouse and skirt, with the cornflower blue solid color chosen for the cummerbund. Approximately four pieces of fabric, measuring 11” x 17” and one measuring 8.5” x 11” were used to construct the three garments.

Findings

As Chudacoff (2007) states, “[child’s] play does have a function that is immediate in its behavioral, social, intellectual, and physical rewards and in the development of the child into an

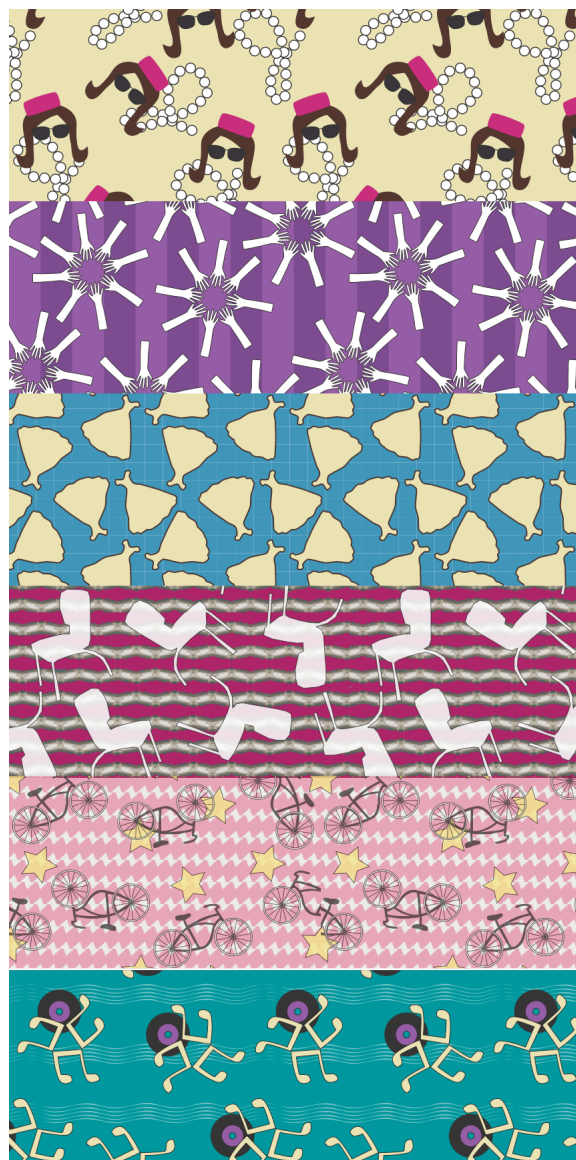
adult” (p. 1). Integrating a child’s play object with an educational function creates a positive outcome, “extending the function of schools into children’s free time” (Chudacoff, 2007). Two types of play defined by Smilansky (1968) are functional play and constructive play. Functional play is the optional use of objects for repetitive and basic movements, and constructive play involves transforming objects in order to design or create another object. While every child learns and plays differently from others, connecting child’s play with a educational function is an important aspect in a child’s life. By using informative text and textile prints inspired by the late 1950s/early 1960s to create paper doll clothing, children can produce both constructive and dramatic play. Linking these types of play with the educational aspect of the text encourages learning amongst children. Future research can be conducted on the historical understanding of the textile prints, by conducting focus groups aimed at children ages 7-10. It could be hypothesized that the children who had access to the booklet and paper dolls would be able to recall the information with greater detail than the children who did not interact with the paper dolls.

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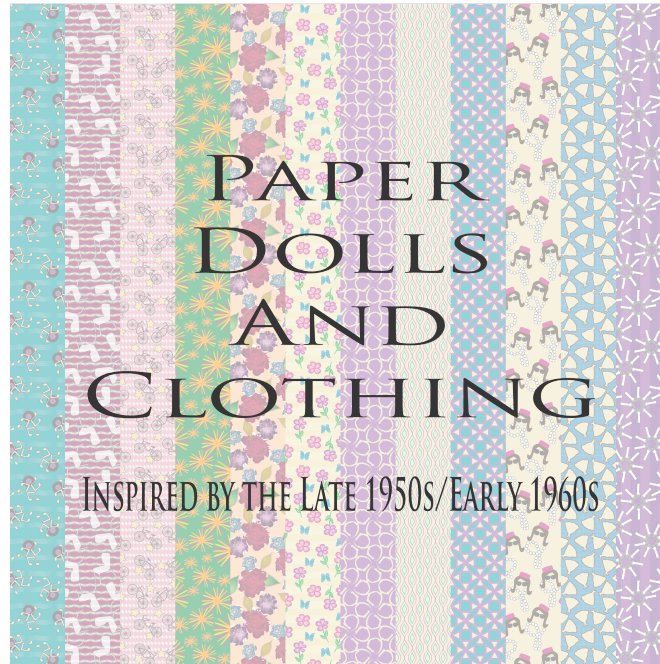


Graphic 1. From top: Floral 1, Floral 2, Floral 3, Geometric 1, Geometric 2, Geometric 3



Graphic 2. From top: Jackie, Gloves, Wedding, Chair, Bicycle, Record

Appendix E. Educational Booklet Developed for Children



In the late 1950s and early 1960s, women and girls wore skirts and dresses almost everyday! Women would wear a short, belted dress during the day, and girls would wear a short skirt with a sweater for school. On the weekends, they would wear “pedal pushers”, which are shorts that end right below your knee, and a sleeveless shirt. They also wore one-piece swimming suits--like you do!

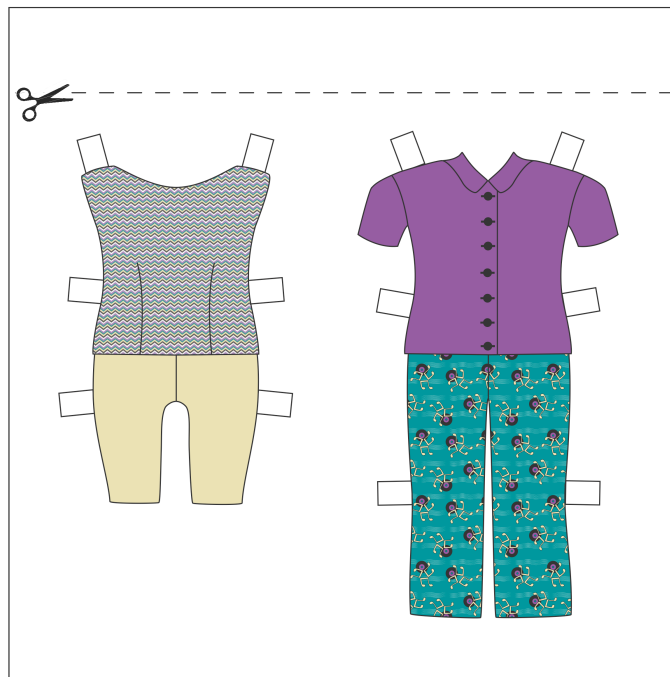
When they really wanted to dress up, they wore long dresses, with white gloves. They were really fancy sometimes! When they got ready for bed, they wore long pants with a short sleeved shirt. All of these pieces of clothing are in this book, which you can cut out for your paper doll. Have fun!

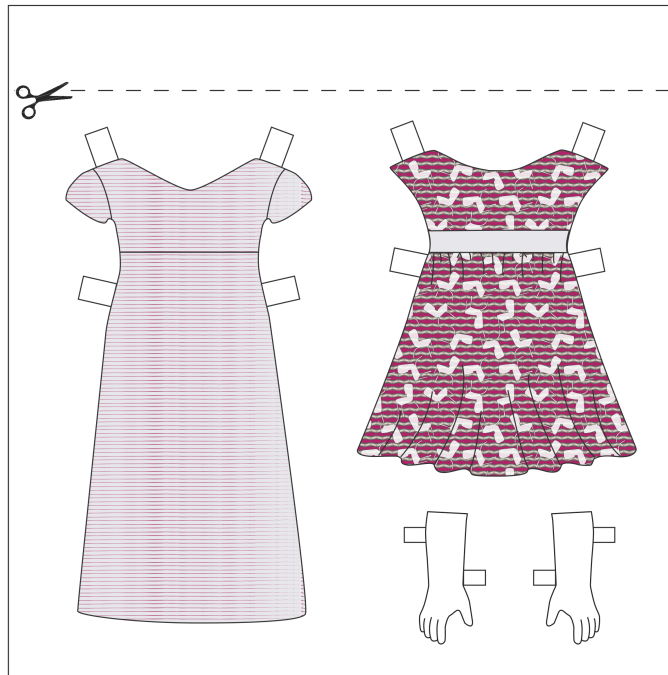
During the late 1950s and early 1960s,
Americans listened to a lot of music!
Back then, they listened to records--which
were large round disks that were played on a
special machine, called a record player.

Families ate every meal during the day together.
Their dining table looked much like yours--but
the chairs often had very bright colors on them
and they were very soft to sit on.

Just like you, children rode their bicycles around
their neighborhoods, and sometime they even
rode them to school! A bicycle from this time
looks similar to a bicycle used today.

Can you find the records, chairs, and bicycles
on the paper doll clothing?





During this time period, floral patterns were seen a lot on clothing--mainly for women and young girls. The people who designed these prints did not have a computer to draw them on, so they were drawn with a paintbrush!

The flowers and leaves had a lot of colors in them, and looked blurry around the edges (because of the paintbrush). Some prints have both a flower bloom and a leaf, while others just have the bloom--it just depended on what looked the best for the print.

Butterflies were also popular for fabrics. Can you find the flower blooms, leaves, and butterflies?

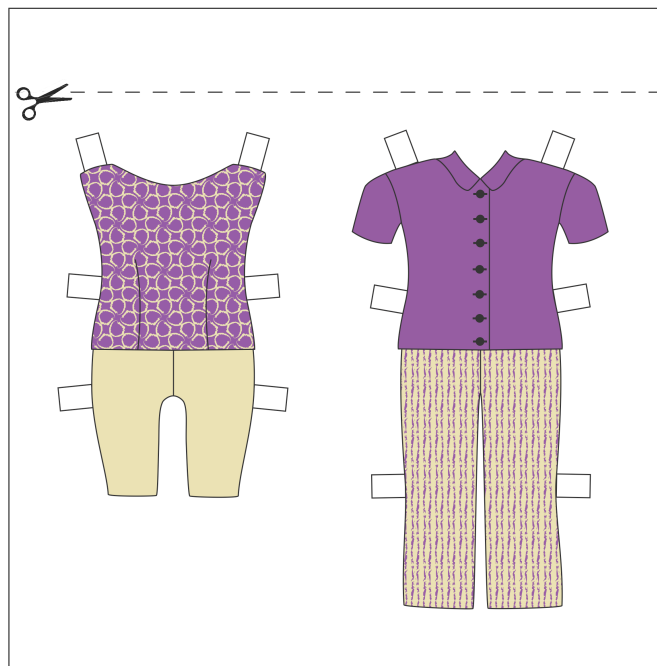


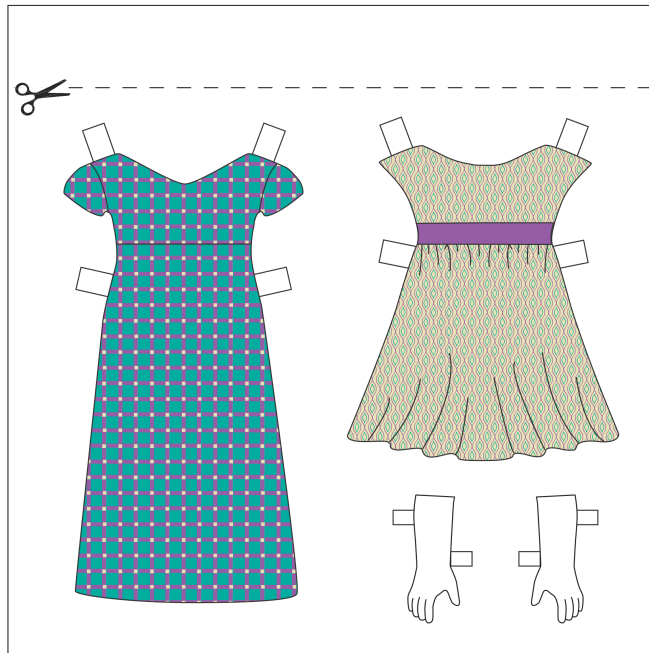


This next section of clothing for your paper dolls has different shapes on them!

Triangles, squares, circles and ovals-- can you spot them all? Using all of these different shapes to make a pattern actually creates many other different shapes. If you look closely, the print with the tan colored circles might look like a flower to you!

They also have the same colors in each of them, so all of the clothing matches each other. Do you have any clothing that would match these colors?





Jacqueline Kennedy Onassis was a very important woman during this time period. People called her “Jackie” and she was married to the President of the United States. The clothing she wore was very popular with other women and they would try to wear the same types of clothing!

When Jackie got married, her wedding dress was very large at the bottom—this became a popular type of wedding dresses later on.

Jackie also wore sunglasses, white gloves, a pearl necklace, and a hat called a pillbox (it looks like a small box is sitting on your head when you wear it!). Can you find them in the clothing?



